BRUHATH BANGALORE MAHANAGARA PALIKE

PROJECT NAME: Construction of Watch Tower in NES Circle of Yelahanka Sub Division

DRAFT TENDER SCHEDULE

S.N	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
1	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. .iii) **Dismantling Stone Masonry. A. Rubble Stone masonry in lime mortar**	Cum	19.58	312.12	6111.31
2	Dismantling the tile work in floor and roof laid in cement or surki mortar including stacking the materials with in 50 m lead of tiles thickness 10mm to 25mm. including cost of materials, labour, HOM complete as per specifications.	Sqm	80.50	52.92	4260.06
3	Easing of shutters of door. including cost of materials, labour, HOM complete as per specifications.	No's	5.00	93.96	469.80
4	Scraping plaster in lime or cement mortar from **brick / stone masonry.**	Sqm	123.92	22.68	2810.51
5	Dismantling of **existing structures like culverts, bridges**, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. By mechanical means. A cement concrete grade M-15m & M-20.	Cum	32.74	372.60	12198.92
6	Dismantling CI or AC rain water Pipes with fittings and clamps and stacking the materials with a lead of 50 meters. including cost of materials, labour, HOM complete as per specifications.	m	50.00	27.00	1350.00
7	Dismantling weather proof course and removing and conveying the debris to a distance upto 200m. including cost of materials, labour, HOM complete as per specifications.	Cum	8.05	799.20	6433.56
8	**Loading and Unloading of Stone Boulder / Stone aggregates /Sand/ Kanker / Moorum**. KSRRB M100-1 : Placing tipper at loading point, loading with front end loader,dumping, turning for return trip, excluding time for haulage and return trip complete as per specifications.	Cum	60.37	103.68	6259.16
9	Earthwork in surface **excavation in ordinary soil for levelling and lowering the ground manually** (other than foundation of buildings, culverts, road drains and trenches of pipe lines and cables) and removing the excavated stuff to a distance not exceeding 50m and lift upto 1.5m, excavated surface levelled and neatly dressed, disposed earth to be levelled after breaking of clods and neatly dressed as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	94.62	268.92	25445.21
10	Earthwork excavation by manual means for foundation of buildings, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in **Ordinary soil** not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	247.50	322.92	79922.70
11	Providing and filling in foundation with granite / trap borken metal 100mm and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with all lead and lift complete as per specification. **(Soling)** with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	9.28	2623.32	24344.41
12	Providing and laying in position **plain cement concrete** of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregate @ 0.892cum and fine aggregates @ 0.465cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms, thick well compacted in foundation including cost of all materials, labour HOM of machinery, curing complete as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	19.73	5609.52	110675.83
13	Providing and laying in **position plain cement concrete of mix M15 with cement @ 240kgs**, with 20mm and down size graded granite metal coarse aggregates @0.878cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation,plinth and sills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	31.54	5855.76	184690.67

	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
14	Providing and constructing **granite / trap / basalt size stone masonry in basement with cement mortar 1:6**, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	18.72	5921.64	110853.10
15	**Filling available excavated earth** (excluding rock) insides of foundations upto plinth in layers not exceeding 20cms. In depth, compacting each deposited layer by ramming after watering with a lead upto 50m. And lift upto 1.5m including cost of all labour (Inside platrform , sides and sides of the area) with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	195.81	217.08	42506.43
16	Conveying the excavated debries and over burden earth etc to a lead 20 kms distances by using private vehicles this including the cost of loading and inloading charges etc with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	118.56	131.76	15621.47
17	Providing and laying in position reinforced cement concrete of design Mix M25 with OPC @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregtes @ 0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns, lintles, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	11.74	6528.60	76619.65
18	Providing and laying in position reinforced cement concrete of design mix M25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @0.70cum and fine aggregtes @ 0.47cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for **footings, pedastals, retaining walls, return walls, walls (any thickness) including attached plasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks,& Plinths etc.**, including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	29.76	6276.96	186802.33
19	Providing and laying flooring using prepolished, gang saw/water cut 19mm thick granite laid with a bed of 20mm thick 1:4 cm & jointed with neat cement slurry mixed with pigment to mach shade of granite slabs including laying POP on finished surface and cleaning the surface, including the cost of all materials, mortar and labours etc., complete as per specifications.**using silver grey granite / Multy Red / Ruby Red / Black / Hassan Green / River Pink Granite of width not less than 1200mm** with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	55.12	2458.08	135489.37
20	Providing & removing centeing shuttering, strutting, propping etc., and removal of form work for foundations, **footings** bases of columns for mass concrete including cost of all materials, labour complete as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	13.20	278.64	3678.05
21	Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for **vertical surface** such as walls at any thicknes including cost of all materials, labour complete as per specifications and direction of the Engineer in charge with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	40.80	386.64	15774.91
22	Providing **TMT Steel Reinforcement for R.C.C work** including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. - **TMT Bars Fe 500** with all lead and lift and directions of the Engineer-In-charge of the work.	MT	2.57	70157.88	180270.67
23	Providing and constructing load bearing wall with concrete solid blocks having block ebsity not less than 1800 kg/m3 Having aq minimum average compressive strength of 5.00 N.mm2 confirming to IA 2185 (Part q) 2005 and constructed with CM 1:4 as [er IS 2572:2005 including cost of all materials labour charges, scaffolding. curing hire charges of machineries etc as per specifications **Solid concrete blocks of Size 400x150x200 mm** with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	45.90	1029.24	47242.12

	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
24	Providing **20mm thick cement plaster in single coat with cement mortar**, to stone masonry & concrete surface including rounding off corners wherever required smooth rendering, including providing and removing scaffolding, cost of materials, labour, curing etc., complete as per specification.**Outside Plastering** with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	102.00	312.12	31836.24
25	Providing **Rough cement plastering** 15mm thick in single coat with cement mortar 1:4, to brick masonry for base of dadooing works with sand of approved quality, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	40.80	221.40	9033.12
26	Providing and fixing M.S. Grill over existing compound wall as per using 16mm x 16mm M.S. Square rod at 150mm c/c spacing and 6mm x 40mm M.S. flats at horizontal and 6mm x12mm M.S. flat for ornamental design and providing shop edge design at the vertex of every vertical rods, including welding, grinding wherever necessary. All the steel surface should be thoroughly cleaned free of rust and painted with anti corrosive paint (shop paint) etc., complete. The work includes cost of all materials, labour charges for all items of work, hire charges for welding, cutting and grinding equipment, and electricity charges, etc., complete as per specification with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	51.00	5798.52	295724.52
27	Providing and fixing Stainless steel 304 grade for staircase raling balconies ramps with hand rail 50mm dia 16 guage hollow pipe welded to vertical hollow 50mm dia pipe of 16 guage, stainless steel vertical pipe spaced at 1.20m regular intervals, and 5 Nos of M25mm dia. Stainless steel hollow horizontal pipe are welded to vertical 50mm dia hollow pipe. The entire assembly is fixed to staircase concrete by using expansion bolts by drilling concrete etc., complete including cost of materials, labour, HOM of machineries and electrical charges, etc., complete as per specifications.**(For Ladders)** with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	12.00	6502.68	78032.16
28	Providing **textured paint** of approved quality, colour and shade to wall surface after cleaning and rubbing the wall surface with wire brush of medium size emery stone to remove all the loosely adhering particles, the surface is then cleaned with water and ensured that it is in line and level. The textured material is then mixed with 40-50% of clean water until a homogeneous thick slurry is formed, the slurry is left for 5-10 min, to react completely with ingredients. The textured finish prepared as above is then applied to the wall surface with suitable roller/spray gun/putty/ blade/ trowel to get the desired finish. The finished surface shall be applied with two coats of exterior paint of approved shade. The rate includes providing and removing scaffolding, all lead and lift and all other incidental charges etc., complete as per directions of the Engineer-in-charge of the work.	Sqm	102.00	474.12	48360.24
29	Providing, laying, spreading and compacting stone aggregates of specific sizes to **water bound macadam** specifications including spreading in uniform thickness, hand packing, rolling with 3- wheeled steel/vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of screening/binding materials to fill up the interstices of coarse aggregates, watering and compacting to the required density complete as per Specification **Crushable type such as Moorum or Gravel for grading II** with all lead and lift and directions of the Engineer-In-charge of the work.	Cum	15.77	2212.92	34897.75
30	Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.**heavy duty cobble stones 60mm thick** with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	260.85	1137.24	296649.05
31	Providing and fixing **Pre cast solid concrete kerb stones** made out of CC 1:2:4 and finished with CM 1:3 plastering and finishing cutting etc., complete.-do- of size **450 x 150 x 500 mm** with all lead and lift and directions of the Engineer-In-charge of the work.	No's	430.00	476.28	204800.40
32	Providing and applying **spray painting in two coats** (excluding priming coat) over concrete / masonry / asbestos cement sheet / plastered surfaces with flat wall paint of approved brand to give even shade after cleaning the surface of all dirt, dust and other foreign matter, and sand papering including cost of materials, labour, complete as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	58.05	91.80	5328.99

	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
33	Providing Skirting, Dado, rises of steps with **BLUE TILES** 6mm thick on 10mm thick cement plaster 1:3 and jointed with white cement slurry over roughj plaster surface (excluding cost of rough plastered surface which should be measured and paid separetely) using glazed tiles of approved make and size including cost of materials, labour, complete as per specifications. **Fixed with Cement Tile, fixing compound and adhesive/Chemical** with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	111.00	1500.00	166500.00
34	Providing and laying **integral cement based waterproofing treatment** including preparation of surface as required for treatment of roofs, balconies, terraces etc., consisting of following application. (a) Applying and grouting a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with proprietary water proofing compound conforming to IS:2645 over the RCC slab after cleaning the surface before treatment. (b) Laying cement concrete using broken brick bats 25mm to 100mm size with 50% of cement mortar 1:5 admixed with proprietary water proofing compound conforming IS:2645 over 20mm thick layer of cement mortar 1:5 admixed with proprietary water proofing compound to required slope and treating similarly the adjoining walls upto 300mm height including rounding off junctions of walls andslabs. (c) After two days of proper curing, applying a second coat of cement lurry admixed with proprietary water proofing compound (d) Finishing the surface with 20mm thick jointless cement mortar of mix 1:4 admixed with proprietary water proofing compound and finally finishing the surface with trowel and neat cement slurry and making of 300x300mm square. (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test including cost of materials, labour complete as per specifications with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	71.00	1073.52	76219.92
35	Laying of barbada gross over newly laid red earth surface **BBMP approved rate** (harticulture) with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	165.00	350.00	57750.00
36	Irrigation Sprinkler with all lead and lift and directions of the Engineer-In-charge of the work.	Sqm	30.00	2000.00	60000.00
37	SAND FILTER with multiport controlllable DMX and VFD based valve Supply of bobbinwound fibreglass and polyester resin anti corrosive sand filter with 1.5" connections, with all lead and lift and directions of the Engineer-In-charge of the work.	No's	1.00	248900.00	248900.00
38	**FILTER MEDIA** Supply of Sand Media Size: 0.5 -1mm & Milled down to remove sharp points with all lead and lift and directions of the Engineer-In-charge of the work.	Kgs	50.00	80.00	4000.00
39	**Recirculation Pump:** Supply of centrifugal self priming pump with high hydraulic efficiency, chemical resistant and ultra quiet operation. Each pump integrated along with IP-55 protection- class F continuous rating. with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	1.00	160000.00	160000.00
40	**MAIN BASIN FITTINGS:** Main Drain , Return inlet Vaccuum point, wall codnuits with all lead and lift and directions of the Engineer-In-charge of the work.	Lot	1.00	31690.00	31690.00
41	**Nozzles FOR FOUNTAIN**: Fountain nozzles Supply of FOAM jets with 2" connection with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	10.00	20000.00	200000.00
42	Control system for nozzles with complete 2 way integration to system with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	1.00	175900.00	175900.00
43	Adj Flange Supply of S S adj flange with 2" inlet & outlet connection capable of leveling the founatin nozzle to plumb with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	9.00	26080.00	234720.00
44	**PUMP FOR FOUNTAIN**: Supply submersible pump 240 LPM @ 6 Mtr head with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	3.00	65900.00	197700.00
45	**LIGHT FOR HGH SPRAY JET: Underwater LIght** Supply of Stainless Steel 316 Stand/ Niche mounted LED light 12W-12V, Warm White with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	9.00	22980.00	206820.00
46	**Driver** Supply of SMPS driver. 50W/ 12V with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	9.00	9500.00	85500.00
47	**UV System** Supply of 25W UV, Suitable for 10-20KLtrs, 1.5" connections with hose tails with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	1.00	69000.00	69000.00

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48	**CONTROL AND REGULATORY VALVES:** All valves shall be in PVC with PN10 ting and EPDM seat. Valves and fittings with complete IP rated, Ball Valve single union dia 7.1, 32 mm , Ball Valve single union dia 63mm , Single union check valve 63mm with all lead and lift and directions of the Engineer-In-charge of the work.	Lot	1.00	65397.00	65397.00
49	**PIPES AND FITTINGS** **MAKE:SUPREME/ FINOLEX** 90mm dia pipe = 6 mtr 75mm dia pipe = 6 mtr 63mm dia pipe = 84 mtr 50mm dia pipe = 36 mtr	Set	1.00	68000.00	68000.00
50	**LIGHT:** Supply of copper cable with PVC conduits from junction boxes to transformer & transformer to control panel. (length in mters as per drawing) 1.5 Sq mm = 100 mtr 2.5 Sqmm = 50 mtr 4 Sqmm = 10 mtr with all lead and lift and directions of the Engineer-In-charge of the	Set	1.00	30000.00	30000.00
51	Supply of Control panel for controlling pumps, lights.Body shall be powder coated sheet metal cabinet for indoor installation, wall mounted, dust proof and shall be with hinged doors with rubber gasket. Panel shall read and display pump status, light status,voltage, current. Panel shall come with single phase prevention, phase reversal protection. (in case of 3-phase pumps). with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	1.00	482000.00	482000.00
52	**CLEANING & MAINTENANCE** **Vacuum Hose , wall brush, algae brush, flat net, deep net, telescopic pole, vaccuuum head, test kit** with all lead and lift and directions of the Engineer-In-charge of the work.	Lot	1.00	120000.00	120000.00
53	**INSTALLATION** with all lead and lift and directions of the Engineer-In-charge of the work.	L/s	1.00	331337.00	331337.00
54	**Clock Tower Structural steel Specification:** Providing, fabricating, erecting and fixing in position of steel plates as per design at all Elevations using fusion welding quality steel conforming to latest IS: 2062- Steel Plate Grade/Classification E250 (Fe410W) B or E350 (Fe 490) (as required and Indicated in drawings), including cutting, welding or bolting, supply of Bolts/nuts/washers etc. complete as per drawings including surface Preparation. The plates are joined together on one side of the web by a continuous automatic submerged arc welding process to produce the section required and other side by stich weld and applying two coats of synthetic enamel paint over a coat of primer at all levels and location etc., complete all as specified. Also Standard sections include RHS as per design standard needs to bus used with Ys – 245 Mpa. Purlins / Girts –Cold formed sections or standard sections of thickness as per design with 245/345 Mpa steel with 275 GSM coating. Bracing rods and sag rods are made of steel bars conforming to IS:2062 with a minimum yield strength of 240MPa. Fabrication Factory drawings should be prepared and the should has to be approved by the architects with all lead and lift and directions of the Engineer-In-charge of the work.	Kg's	5135.00	180.00	924300.00

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55	Clock dial design .... : Roman number dials with central Art work as per your selected clock dials. The numbers will be black vinyl cut letters placed on Food Grade Acrylic Imported Sheet of 5mm Thickness. We will produce the clock dial exactly as per your selected design.2. Machine for the tower clocks..... ..... : We will provide GPS based Machine for the tower clock so that the clocks will work with satellite time signals and will display IST Indian Standard Time. 3. Hands for the clock dials..... .. .. : We will provide One No. Hour hand and One No. Minute hand to show time on the clocks. Both the hands will be made with Aluminium Sheet metal and will be dynamically balanced for smooth travelling on the clock dials. The hands will be finished with black powder coat finish . 4. Working power for the tower clocks..... : The tower clocks will be designed to work with 220 Volts AC Single Phase 50Hz. Electric Power. . Battery back up for the tower clocks..... : We will provide 24 hours battery back-up for the tower clocks. The battery will provide power to the clocks for 24 hours on continuous rating. As soon as the electric power resumes, the clocks will start working with AC electric power. Changing from AC power to Battery power and back to AC electric power will be totally automatic. 6. Time Auto re-set facility in the clocks .... : If the power cut prolongs for more than 24 hours then the clocks will stop working. But as soon as the electric power resume, the clocks will set to right time automatically with GPS time signals received from satellite. With GPS time signals the clocks will be totally automatic and there is no need for time setting or time adjusting on the clocks after power break down times. 7.We wish to inform you that there will not be any time adjusting or time setting controls in our Tower clocks. The clocks will work with Satellite connectivity and the time will be perfect to IST-Indian Standard Time. There are 24 Satellites in the Orbit. Even if one satellite works, our clocks will take time signals from the satellite and will display ISTIndian Standard Time. If by any chance the satellite signals fails to the clocks, the clocks will be working with inbuilt RTC (Real Time Clock). As soon as the satellite time signals reach our clocks, the clocks will display IST-Indian Standard Time. There will not be any time deviation on the clocks even if the satellite	Nos	2.00	685000.00	1370000.00
56	**INSTALLATION** with all lead and lift and directions of the Engineer-In-charge of the work.	L/s	1.00	157550.00	157550.00
57	**HT Cable :** Supply and laying of high tension 11 KV cable, Dry Curing & Dry Cooling with true triple extrusion, 3 core under ground XLPE (E) cable having stranded compact circular aluminium conductor, screened insulated, insulation screened with extruded semiconducting compound in combination with copper tape, core laid up innner sheathed of PVC tape GI flat strip armoured and overall PVC sheathed as per **IS 7098/11/85 with latest ammendments 3C x 185Sq.mm** with all lead and lift and directions of the Engineer-In-charge of the work.	m	30.00	1380.00	41400.00
58	Supplying of 1.1 KV LT UG cable XLPE or Heat resistant pvc insulatied,pvc extruded inner sheath armoured UG LT cable as per IS-1554(Part-1), or IS-7098 part-1, Armoring strip thickness in average +5% and resistivity 14ohms/kms(max) as per IS-3975 with all lead and lift and directions of the Engineer-In-charge of the work.	m	60.00	150.00	9000.00
59	Labour charges for laying of 1.1 KVclass UG cable in existing trench GI pipe / stoneware pipe / on wall/ on pole as required. 6 Sqmm to 16 Sq.mm with all lead and lift and directions of the Engineer-In-charge of the work.	m	50.00	11.88	594.00
60	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	10.00	12.44	124.40
61	Supplying and fiixing of heavy duty cable glands suitable for UG cable of 1.1 KVclass (metal only) 19/20mm dia with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	10.00	68.00	680.00
62	Supply and fixing of class A (Medium Duty) GI Pipe of wall thickness not less than 3.25mm on pole/ wall/ drain crossing with necessary clamping arrangements for UG cable of 1.1 KV 65mm with all lead and lift and directions of the Engineer-In-charge of the work.	m	20.00	566.00	11320.00
63	Supply and fixing of class A (Medium Duty) GI Pipe of wall thickness not less than 3.25mm on pole/ wall/ drain crossing with necessary clamping arrangements for UG cable of 1.1 KV 80mm with all lead and lift and directions of the Engineer-In-charge of the work.	m	15.00	688.00	10320.00
64	providing, laying and fixing following dia RCC pipe NP2 class (light dyuty) in ground complete with RCC collars,jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc. as required 150mm dia with all lead and lift and directions of the Engineer-In-charge of the work.	m	15.00	598.00	8970.00
65	providing, laying and fixing following dia RCC pipe NP2 class (light dyuty) in ground complete with RCC collars,jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc. as required 300mm dia with all lead and lift and directions of the Engineer-In-charge of the work.	m	15.00	854.00	12810.00

	DESCRIPTION OF WORK	UNIT	QTY	RATE	AMOUNT
66	Supply of LED Street light with pressure die cast aluminum housing body for optimal thermal dissipation. lamp compartment comprising of anit glare diffuser with injection moulded poly carbonate material delivering superior light output.Rated life burning Hrs 50000 hr. @ Lumen Maintainace of 70% maximum light intenstiy should be between 60degree to 70degrees. CCT>5500K IP66 optical and eectrical compartment & impact resistance of complete luminaire>IK08.Power Factor >0.9 with mains Surgeprotection min 5KV along with over voltage/Over load short circuit/ miswiring protection .compatible for pole mounting with outer dia of 40mm to 50mm.Universal Voltage driver to operate wide voltage range from 100v to270V 50/60Hz application. Compliance to IS 10322/IEC 60598,LM 79 & LM 80adherence with RoHS.UL approved MCPCB.Top access street light with single screw to ensure ease of maintainence at the sight site location with minimized minimal tools.LED light fixture with below wattage system power consumption.LED Efficiency > 130lm/w at 1W , nominal CRI >75+ Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any goverment certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark/name shall be engraved/emossing on the die cast husing/ Body prat. Warranty of 2 years against any manufacturng defect working under standard electrical condition as mentiond above should be given by LED Manufacturer & cree/ Nichia/ lumiled/Osram Make led source 90 Watts with all lead and lift and directions of the Engineer-In-charge of the work.	No's	10.00	7160.00	71600.00
67	Fixing Halogen/metal halide/SVL/IL/LED flood light fitting over esisting pole/ wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires. with all lead and lift and directions of the Engineer-In-charge of the work.	No's	5.00	175.00	875.00
68	Supplying, fixing, wiring, earth electrode for grounding of lifts, transformers, DG set etc using 40mm dia 2.9mm thick 2.5 mtr long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the earth electrode. The funnel should be enclosed in a CC chamber of 400x400x400mm with a cast iron cover. The earth electrode shall have staggered holes of 12mm dia and the electrode should be covered 150mm all-round with alternate layers of salt and charcoal from the bottom of the CC chamber. The connection from the electrode is to be established through GI strip using GI bolts and nuts with all lead and lift and directions of the Engineer-In-charge of the work.	No's	6.00	4150.00	24900.00
69	Chemical earthing for grounding, cutouts, IC cutouts and other equipments on the meter board by using copper bonded/ SS rod with earth enhancing backfill compound which is non corrosive, thermally conductive, potential to permissible limits, superior fault condition capacity, non toxic weather resistance and capable of achieving ohmic value less than one ohm Using 10 ft copper bonded rod with backfill compund with all lead and lift and directions of the Engineer-In-charge of the work.	No's	3.00	7260.00	21780.00
70	Supplying and running of GI/copper strips for grounding connectionss, using necessary fixing material as required GI Strip 25x3mm with all lead and lift and directions of the Engineer-In-charge of the work.	m	120.00	75.00	9000.00
71	Supplying and running of GI/copper strips for grounding connectionss, using necessary fixing material as required **GI Strip 25x3mm** with all lead and lift and directions of the Engineer-In-charge of the work.	m	90.00	115.00	10350.00
72	Supplying and running of GI/copper strips for grounding connectionss, using necessary fixing material as required **CU Strip 25x3mm** with all lead and lift and directions of the Engineer-In-charge of the work.	m	174.00	505.00	87870.00
73	Supplying and running of GI/copper strips for grounding connectionss, using necessary fixing material as required **CU Strip 40x6mm** with all lead and lift and directions of the Engineer-In-charge of the work.	m	174.00	958.00	166692.00
74	Supplying and running G/Copper Conductor for grounding and (along with other wires in conduit system of wiring)using necessarysuitable size clamps,nails, guttas/Spacers etc... 8 SWG GI Wire with all lead and lift and directions of the Engineer-In-charge of the work.	m	847.00	19.00	16093.00
75	25x6mm solid tape(flat) Conductor complete as specified in drawing & Meets the requirements. with all lead and lift and directions of the Engineer-In-charge of the work.	m	144.00	115.00	16560.00
76	25x6mm GI solid tape(flat) Conductor complete as specified in drawing & Meets the requirements. with all lead and lift and directions of the Engineer-In-charge of the work.	m	110.00	115.00	12650.00
77	Supplying and fixing of Hot dip Galvanized M.S Bracket suitable for outdoor luminaires and mounted on octagonal pole using necessary bolts, nutes etc. complete. Single arm bracket with 1500mm standard 40/50dia with all lead and lift and directions of the Engineer-In-charge of the work.	Nos	1.00	2112.00	2112.00

"DTS APPROVED"

Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore-92

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